

PATENT
USSN 08/974,584
015389-002950US
018/206p2

RECEIVED
CENTRAL FAX CENTER

AUG 03 2006

REMARKS

This paper is responsive to the Office Action dated June 2, 2006.

Claims 119 and 127-131 were pending in this application. Claims 119 and 129 have been examined and stand variously rejected. Upon entry of this amendment, certain claims are amended and claim 128 is cancelled. Accordingly, the pending claims are 119, 127, and 129-131.

Applicants acknowledge with gratitude withdrawal of rejections previously made under 35 USC § 102(e) with respect to U.S. Patent 6,093,809. Further consideration and allowance of the application is respectfully requested.

Interview summary

The undersigned wishes to thank Examiner Myers for the helpful telephone interview conducted on July 6, 2006. The claim wording presented in this Amendment was discussed, along with ways of overcoming the current rejections in the case.

The application is now believed to be in condition for allowance, which is respectfully requested.

Restriction requirement and request for rejoinder

The Office Action states that claims 128 and 130 as previously presented were drawn to subject matter outside the invention elected for examination. Applicants agree. Claim 128 has now been cancelled, and claim 130 has been rewritten as a polynucleotide claim, depending from another polynucleotide claim in the elected group.

Applicants hereby renew their request that claims 127 and 131 be rejoined into the group under examination upon determination that the product claims from which they depend are patentable.

Rejection under 35 USC § 112 ¶ 2

Claim 119 and 129 stand rejected as indefinite for reasons of claim wording. The claims have now been amended in accordance with the Examiner's recommendation, for which applicants are grateful.

PATENT
USSN 08/974,584
015389-002950US
018/206p2

Rejections under 35 USC § 112 ¶ 1

Claim 119 stands rejected under the written description and enablement requirements of § 112 ¶ 1, for reasons related to the *proviso* clause as previously presented.

The claim has now been amended to state that the claimed polynucleotide does not contain consecutive nucleotides 1-2009 of SEQ. ID NO:124. Reference to this portion of SEQ. ID NO:124 as part of the mouse telomerase reverse transcriptase cDNA sequence may be found in the specification on page 165, lines 3-10.

Withdrawal of the rejections under 35 USC § 112 ¶ 1 is respectfully requested.

Applicants submit that the claim as presently worded is again not subject to obviousness-type double patenting with respect to U.S. Patent 6,767,719, which claims polynucleotides encoding mouse telomerase reverse transcriptase, and functional homologs thereof. Appendix A compares SEQ. ID NO:124 of this application with the cDNA and encoded protein sequence from the '719 patent. SEQ. ID NO:124 encodes 658 amino acids (i.e., over half) of the native mTRT protein.

Double patenting

Claims 119 and 129 of this application stand rejected for obviousness-type double patenting over certain claims of U.S. Patents 6,927,285; 6,921,664; 6,337,200; 6,475,789; and 6,444,650. These claims are also provisionally rejected for obviousness type double patenting over certain claims of copending applications USSN 09/721,477; USSN 10/877,124; USSN 10/044,539; USSN 09/721,506; USSN 11/207,078; and USSN 10/044,692.

Applicants respectfully submit that nothing needs to be done with respect to USSN 09/721,477; USSN 11/207,078, and USSN 10/044,692, because they are less advanced in prosecution and not expected to issue first. The other patents and applications will be addressed under separate cover.

PATENT
U.S.S.N. 08/974,584
015389-002950US
018/206p2

Rejection under 35 USC § 102(e):

The claims under examination stand rejected under § 102(e) as being anticipated by what is disclosed in U.S. Patent 6,309,867, which names different inventors from the inventors named in the present application.

Enclosed with this Amendment is a second Declaration under 37 CFR § 1.132 by Calvin Harley. He explains that the *Schizosaccharomyces pombe* sequence was deduced by Thomas Cech and Toru Nakamura. Only the *pombe* protein sequence is claimed in the '867 patent, and so the patent appropriately names Cech and Nakamura as the inventive entity. However, the human TERT sequence and use thereof disclosed but not claimed in the '867 patent was deduced by the same inventors as are named on the present application.

Thus, the relevant information disclosed in the cited patent does not qualify as an invention by "another" under 35 USC § 102(e). Withdrawal of this rejection is respectfully requested.

Request for further interview

Applicants respectfully request that all outstanding rejections be reconsidered and withdrawn. Once the double patenting issues are addressed, the application should be in condition for allowance, and a prompt Notice of Allowance is requested.

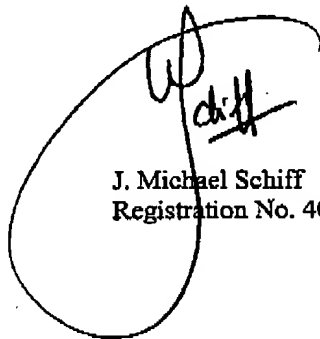
In the event that the Examiner determines that there are other matters to be addressed, applicants hereby request an interview by telephone.

PATENT
USSN 08/974,584
015389-002950US
018/206p2

Fees due

No fee is believed payable with respect to entry and consideration of this response. However, should the Patent Office determine that a further extension of time or any other relief is required for further consideration of this application, applicants hereby petition for such relief, and authorize the Commissioner to charge the cost of such petitions and other fees due in connection with the filing of these papers to Deposit Account No. 07-1139, referencing the docket number indicated above.

Respectfully submitted,

A large, handwritten signature in black ink, appearing to read "J. Michael Schiff", is written over a large, hand-drawn oval. The signature is stylized and cursive.

J. Michael Schiff
Registration No. 40,253

GERON CORPORATION
230 Constitution Drive
Menlo Park, CA 94025
Telephone: (650) 473-7715
Fax: (650) 473-8654

July 21, 2006

Appendix A**SEQ. ID NO.124 of the current application**

CGGCTGGGAG GCCCATCCCG GCCTTGAGCA CAATGACCCG CGCTCCTCGT TGGCCCGCCG TCCGCTCTCT GCTGCGCAGC
CGATACCGGG AGGTGTGGCC GCTGGCAACC TTTGTGCGGC GCCTGGGGCC CGAGGGCAGG CGGCTTGTC AACCCGGGA
CCCGAAGATC TACCGCACTT TGTTGCCCA ATGCCTAGTG TGCATGCACT GGGGCTCACA GCCTCCACCT CCCCACCTTT
CCTTCCACCA GGTGTATCC CTGAAAGAGC TGGTGGCCAG GGTGTGTCAG AGACTCTGCG AGCGCAACGA GAGAAACGTG
CTGGCTTTTG GCTTTGAGCT GCTTAACGAG GCCAGAGGCG GGCTCCCAT GGCCTTCACT AGTAGCGTGC GTAGCTACTT
GCCCAACACT GTTATTGAGA CCTGCGTGT CAGTGGTGCA TGCATGCTAC TGTGAGCCG AGTGGGGCAG CACCTGCTCG
TCTACCTGCT GGCACACTGT GCTCTTTATC TTCTGGTGCC CCCCAGCTGT GCCTACCAGG TGTGTGGGTC TCCCCGTAC
CAAATTTGTG CCACCACGA TATCTGGCCC TCTGTGTCCG CTAGTTACAG GCCCACCCGA CCCGTGGGCA GGAATTTAC
TAACCTTAGG TTCTTACAAC AGATCAAGAG CAGTAGTCCG CAGGAAGCAC CGAAACCCCT GGCCTTGCCA TCTCGAGCTA
CAAAGAGGCA TCTCAGTCTC ACCAGTACAA GTGTCCCTTC AGCTAAGAAG GCCAGATGCT ATCCTGTCCC GAGAGTGGAG
GAGGGACCCC ACAGGCAGGT GCTACCAACC CCATCAGGCA AATCATGGGT GCCAAGTCT GCTCGGTCCC CCGAGGTGCC
TACTGCAGAG AAAGATTTGT CTCTAAAGG AAAGGTGTCT GACCTGAGTC TCTCTGGGTC GGTGTGCTGT AAACACAAGC
CCAGCTCCAC ATCTCTGCTG TCACCACCCC GCCAAAATGC CTTCAGCTC AGGCCATTTA TTGAGACCAG ACATTTCTCT
TACTCCAGGG CAGATGGCCA AGAGCGTCTA AACCCTCAT TCCTACTCAG CAACCTCCAG CCTAACTTGA CTGGGGCCAG
GAGACTGGTG GAGATCATCT TTCTGGGCTC AAGGCTAGG ACATCAGGAC CACTCTGCAG GACACACCGT CTATCGCGTC
GATACTGGCA GATGGGCCCC CTGTTCCAAC AGCTGCTGCT GAACCATGCA GAGTGCCAAT ATGTCAGACT CCTCAGGTCA
CATTCAGGT TTCGAACAGC AAACCAACAG GTGACAGATG CCTTGAACAC CAGCCACCCG CACCTCATGG ATTTGCTCCG
CCTGCACAGC AGTCCCTGGC AGGTATATGG TTTTCTTCGG GCCTGTCTCT GCAAGGTGGT GTCTGCTAGT CTCTGGGTA
CCAGGCACAA TGAGGCCCGC TTCTTTAAGA ACTTAAAGAA GTTCATCTCG TTGGGGAAAT ACGGCAAGCT ATCACTGCAG
GAACTGATGT GGAAGATGAA AGTAGAGGAT TGCCACTGCC TCCGCAGCAG CCGGGGGAAG GACCGTGTCC CCGCTGCAGA
GCACCGTCTG ACGGAGAGGA TCCTGGCTAC GTTCCTGTTG TGGCTGATGG ACACATACGT GGTACAGCTG CTTAGGTCT
TCTTTTACAT CACAGAGAGC ACATTCCAGA AGAACAGGCT CTCTCTCTAC CGTAAGAGTG TGTGGAGCAA GCTCCAGAGC
ATTGGAGTCA GCGAACACCT TGAGAGAGTG CCGCTACGGG AGCTGTCAAG AGAGGAGGTC AGGCATCACC AGGACACCTG
GCTAGCCATG CCCATCTGCA GACTGCGCTT CATCCCCAAG CCAAACGGCC TGGGGCCCAT TGTGAACATG AGTTATAGCA
TGGGTACCAG AGCTTTGGGC AGAAGGAAGC AGGCCACGA TTTACCCAG CGTCTCAAGA CTCTCTCAG CATGCTCAAC
TATGAGCCC

PATENT
USSN 08/974,584
015389-002950US
018/206p2

mTERT cDNA sequence (SEQ. ID NO.1) from U.S. Patent 6,767,719

GAATTCGGGTGGGAGGCCCATCCGGCCTTGACCAATGACCCGGCTCTCGTTGCCCGGGTGGCTCTCTGCTGGCAGCCGATACCG
GGAGGTGTGGCCCTGCCAACCTTTGTGCGCGCCTGGGGCCGAGGGCAGCCGGCTTGTCACCCGGGGACCCCAAGATCTACCGCACTTTG
GTTGCCCAATGCCTAGTGTGCATGCACCTGGGGCTCAGAGCTCCACCTGCCGACCTTTCCTCCACCAGGTGTATCCCTCAAAGAGCTGGTGG
CCAGGGTTGTGCAGAGACTCTGCCAGCGCAACGAGAGAAACGTGGTGGCTTTTGGCTTTGAGCTGCTTAACGAGGCCAGAGCGCGCTCCCAT
GGCCTTCACTAGTAGCGTGGCTAGCTACTTGCCTAACCTGTTATTGAGACCCCTGGCTGTAGTGGTGCATGGATGCTACTGTTGAGCGGAGTG
GGCGACGACCTGCTGGTCTACCTGCTGGCAGCTGTGCTCTTTATCTTCTGGTGGCCCCAGCTGTGCTACCAGGTGTGGGTCTCCCTGT
ACCAAATTTGTCCACACCGATATCTGGCCCTCTGTGTCCGCTAGTTACAGGCCACCCGACCCGTGGGCGAGGAATTTCACTAACCTTAGGTT
CTTACAACAGATCAAGAGCAGTAGTGGCAGGAAGCACCGAAACCCCTGGCTTGGCATCTCGAGGTACAAGAGGCATCTGAGTCTACCAAGT
ACAAGTGTGCCTTCAGCTAAGAAGGCCAGATGCTATCCTGTCCGAGAGTGGAGGAGGGACCCACAGGCAGGTGTACCAACCCCATCAGGCA
AATCATGGCTGCCAAGTCTGCTCGGTCCCCGAGGTGCTACTGCAGAGAAAGATTTGTCTTAAAGGAAAGGTGTCTGACCTGAGTCTCTC
TGGCTCGGTGTGCTGTAAACACAAGCCAGCTCCACATCTGCTGTGACCCCGCCGCAAAATGCCTTCAGCTCAGGCCATTTATTGAGACC
AGACATTTCTTTACTCCAGGGGAGATGCCAAGAGCGTCTAAACCCCTCACTTCTACTCAGCAACCTCCAGCTAACTTGAAGTGGGGCCAGGA
GACTGGTGAGATCATCTTTCTGGCTCAAGGCTAGGACATCAGGACCACTCTGCAGGACACACCGTCTATCGCGTGGATCTGGCAGATCGG
GCCCTGTTCCACAGCTGCTGGTGAACCATGCAGAGTGGCAATATGTCAGACTCTCAGGTACATTTGAGGTTTGAACAGCAAAACCAACAG
GTGACAGATGCTTGAACACAGCCACCGCACTCATGGATTTGCTCCGCTGCACAGCAGTCCCTGGCAGGTATATGTTTTCTTCGGGCT
GTCTCTGCAAGGTGGTGTCTGCTAGTCTCTGGGTACAGGCACAATGAGCGCGCTTCTTAAAGAACTTAAAGAGTTTATCTGTTGGGAA
ATACGGCAAGCTATCACTGCAGGAACATGATGGAAGATGAAGTAGAGGATTGCCACTGGCTCCGAGCAGCCCGGGGAGGACCGGTCTCCCC
GCTGCAGAGCACCGTCTGAGGGAGAGGATCCTGGCTAGCTTCTGCTCTGCTGATGGACACATACGTGGTACAGCTGCTTAGCTCATTTCTTT
ACATCAGAGAGGACATTCAGAGAAGACAGGCTCTTCTTACCGTAAGAGTGTGTGAGCAAGTGCAGAGCATTTGAGTCAGGCAACACCT
TGAGAGAGTGGCGCTACGGGAGCTGTCAAGAGGAGGTGAGGATCACCAGGACACCTGGCTAGGCTAGCCATGCCATCTGCAGACTGCGCTTATC
CCCAAGCCCAAGCGCTGCGGCCCATTTGTAACATGAGTTATAGCATGGGTACCAGAGCTTTGGGCAAGCAAGCAGGCCAGCATTTCACCC
AGCGTCTCAAGACTCTCTTACGATGCTCAACTATGAGCGGACAAAACATCTCACTTATGGGTCTTCTGACTGGGTATGAATGACATCTA
CAGGACCTGGCGGCTTTGTGCTGGTGTGGTGTCTGACACGACACCCAGGATGTAATTTGTTAAGGCAGATGTACCCGCGGCTATGAT
GCCATCCCCAGGCTAAGCTGGTGGAGGTTGTTGCCAATATGATCAGGCATCGGAGAGCAGTACTGATCCGCCAGTATGAGTGGTCCGGA
GAGATAGCCCAAGGCCAAGTCCACAAGTCTTTAGGAGACAGCTCACCACCTCTCTGACCTCAGGCATACATGGCGGCTCTTAAAGCATCT
GCAGGATTCAGATGCCAGTGCAGTGAAGAACTCGTGTCTATCGAGCAGAGCATCTATGAATGAGAGCAGCAGCAGCTGTTGACTTCTTC
CTGCATTTCTGCGTCAAGTGTGCTAAGATTGGTGACAGGTGCTATACGAGTGGCAGGGCATCCCCAGGGCTCCAGCCTATCCACCTGCT
TCTGCAGTCTGCTTTCCGAGACATGGAGAACAAGCTGTTGCTGAGGTGCAGCGGATGGGTGCTTTTACGTTTGTGTGACTTCTGTT
GGTGACGCTCACTTGGACCAAGCAAAACCTTCTCAGCACCTGGTCCATGGCGTCTCTGAGTATGGGTGCATGATAAACTTGCAGAAGACA
GTGCTGAACCTTCCCTGTTGAGGCTGGTACCTGGGTGGTGCAGCTCCATACCAGCTGCGCTGCTCACTGCGCTGTTTCCCTGGTGGGTGCTGCT
TGGCACTCAGACTTGGAGGTGTTCTGTGACTACTCAGGTTATGCCAGACCTCAATTAAGACGAGCTCAGCTTCCAGAGTGTCTTCAAAAGC
TGGCAAGACCATGCGGAACAGCTCCTGCGGTGTTGCGGTGAGAGTGTGACGGTCTATTTCTAGACTTGCAGGTGAACAGCTCCAGACAGTC
TGCATCAATATATACAGATCTTCTGCTTACGGCTACAGGTTCATGATGTGTGATTGAGCTTCCCTTTCAGCAGCGTGTAGGAAGAACCC
TCACATTTCTTGGGATCATCTCCAGCAAGCATCTGCTGCTATGCTATCCTGAAGTCAAGAAATCCAGGAATGACACTAAAGCCCTCTGG
CTCCTTCTCCTTGAAGCCGACATTTGGCTCTGCTACCAGGCTTCTGCTGAGCTGCTCATTTCTGTGCTACCAATGCTCTCTGGGA
CCTCTGAGGACAGCCAAAACCTGCTGCTCCGGAAGCTCCAGAGGCGACAATGACCATCCTTAAAGCTGAGCTGACCCAGCCCTAAGCAAG
ACTTTACAGACATTTTGGACTAACCTGTCTCTTCCGCTACATGAACATGAAGGGCGAATTCAGCACACTGGCGCGCTTACTAGTGCATCC
GAGCTCGGTACCAAGCTT

mTERT protein sequence (SEQ. ID NO.2) from U.S. Patent 6,767,719

MTRAPRCPAVRSLRSRYREVWPLATFVRRLLGPEGRRLVQPGDPKTYRTLVAQCLVCMHWGSQPPADLSFHQVSSLKELVARVVQRLCERNR
NVLAFFGELLNEARGPPMAFTSSVRSYLPNTVETLRVSGAWMLLSRVGDDLLVYLLAHCALYLLVPPSCAYQVCGSPLYQICATTDIWPVS
SASYRPTRPVGRNFTNLRFLQIKSSSRQEAQKPLALPSRGTKRHLSTSTSVPSAKKARCYPVPRVEEGPHRQVLPTPSGKSWVPSPARSEV
PTAEKDLSSKGKVSLSLSGVSCKHKPSSTLSLSPRQNAFLRPFIEIRHFLYSRGDQERLNPSFLLSNLQPNLTGARRLVEIIFLGSRRP
TSGPLCRTHRLSRRYQMRPLFQQLLVNHAECQYVRLRSHCRFRANQVTDALNTSPPHLMDLLRLHSSPWQVYGFRLACLCKVVSASLWGT
RHNERRFFKNLKKFISLGKYGKLSLQELMWMKVEDCHWLRSPPGKDRVPAAEHRLRERJLATFLFLWMDTYVQLLRSFFYITESTFQKNRLF
FYRKSVMWSLQSIGVRQHLERVLRELSEEVRRHQDTWLAMPICRLRFIPKPNGLRPVNMYSYMGTRALCRRKQAQHFTRQLKTLFSLNLYE
RTKHPHLMGSSVLMQNDIYRTWRFAVLVRALDQTPRMFVKADVTGAYDAIPQKLVLEVANMIRHSESTYCIQYAVVRRDSQGVHKSFRF
QVTTLSDLQPYMGQFLKHLQSDASALRNSVVEIQSISMNESSSLDFDFLHFLRHVSVKIGDRCYTCCQIPQGSLSLTLCSLCFGDMENKL
FAEVQRDGLLLRFVDDFLVTPHLDQAKTFLSTLVHGVPEYGCIMNLQKTVNFPVEPTLGGAAPYQLPAHCLFPWCGLLLDQTLEVFCDYS
GYAQTSLKTSFTQSVFKAGKTRNKLKLSVLRLKCHGLFDLDQVNSLQTVYCNLYKIFLLQAYRFHACVILQFPDQVRVKNLTFFLGISSQAS
CCYAILKVKNPQMTLKASGSFPPEAAHWLCYQAFLLKLAHHSVIYKCLGLPLRTAQKLLCRKLPEATMTILKAAADPALSTDFQTIID

PATENT
USSN 08/974,584
015389-002950US
018/206p2

BLAST comparison of nucleic acid sequence

BLASTX algorithm, NCBI website

```
SEQ. ID NO.124: 1 CCGGTGGGAGGCCCATCCCGGCTTGAGCACAATGACCCGCGCTCCTCGTTGCCCGCGG 60
|||||
mTRT: 7 CCGGTGGGAGGCCCATCCCGGCTTGAGCACAATGACCCGCGCTCCTCGTTGCCCGCGG 66
|||||

SEQ. ID NO.124: 61 TGGCTCTCTGCTGCGCAGCCGATACCGGAGGTGTGGCCGCTGGCAACCTTTGTGGGC 120
|||||
mTRT: 67 TGGCTCTCTGCTGCGCAGCCGATACCGGAGGTGTGGCCGCTGGCAACCTTTGTGGGC 126
|||||

SEQ. ID NO.124: 121 GCCTGGGGCCCGAGGGCAGCGGCTTGTGCAACCCGGGACCCGAAGATCTACCGCACTT 180
|||||
mTRT: 127 GCCTGGGGCCCGAGGGCAGCGGCTTGTGCAACCCGGGACCCGAAGATCTACCGCACTT 186
|||||

SEQ. ID NO.124: 181 TGGTTGCCCAATGCCTAGTGTGCATGCACTGGGGCTCACAGCCTCCACCTGCCGACCTT 240
|||||
mTRT: 187 TGGTTGCCCAATGCCTAGTGTGCATGCACTGGGGCTCACAGCCTCCACCTGCCGACCTT 246
|||||

SEQ. ID NO.124: 241 CCTTCCACCAGGTGTCTATCCCTGAAAGAGCTGGTGGCCAGGGTGTGCAGAGACTCTGCG 300
|||||
mTRT: 247 CCTTCCACCAGGTGTCTATCCCTGAAAGAGCTGGTGGCCAGGGTGTGCAGAGACTCTGCG 306
|||||

SEQ. ID NO.124: 301 AGCGCAACGAGAGAAACGTGCTGGCTTTTGGCTTTGAGCTGCTTAACGAGGCCAGAGGCG 360
|||||
mTRT: 307 AGCGCAACGAGAGAAACGTGCTGGCTTTTGGCTTTGAGCTGCTTAACGAGGCCAGAGGCG 366
|||||

SEQ. ID NO.124: 361 GGCTCCCATGGCCTTCACTAGTAGCGTGGTAGCTACTTGCCCAACACTGTTATTGAGA 420
|||||
mTRT: 367 GGCTCCCATGGCCTTCACTAGTAGCGTGGTAGCTACTTGCCCAACACTGTTATTGAGA 426
|||||

SEQ. ID NO.124: 421 CCCTGCGTGTCACTGGTGCATGGATGCTACTGTTGAGCCGAGTGGGCGACGACCTGCTGG 480
|||||
mTRT: 427 CCCTGCGTGTCACTGGTGCATGGATGCTACTGTTGAGCCGAGTGGGCGACGACCTGCTGG 486
|||||

SEQ. ID NO.124: 481 TCTACCTGCTGGCAGACTGTGCTCTTTATCTTCTGGTGCCCCCAGCTGTGCCTACCAGG 540
|||||
mTRT: 487 TCTACCTGCTGGCAGACTGTGCTCTTTATCTTCTGGTGCCCCCAGCTGTGCCTACCAGG 546
|||||

SEQ. ID NO.124: 541 TGTGTGGGTCTCCCTGTACCAAAATTTGTGCCACCACGGATATCTGGCCCTCTGTGTCCG 600
|||||
mTRT: 547 TGTGTGGGTCTCCCTGTACCAAAATTTGTGCCACCACGGATATCTGGCCCTCTGTGTCCG 606
|||||

SEQ. ID NO.124: 601 CTAGTTACAGGCCACCCGACCCGTGGGCAGGAATTTCACTAACCTTAGGTTCTTACAAC 660
|||||
mTRT: 607 CTAGTTACAGGCCACCCGACCCGTGGGCAGGAATTTCACTAACCTTAGGTTCTTACAAC 666
|||||

SEQ. ID NO.124: 661 AGATCAAGAGCAGTAGTCGCCAGGAAGCACCGAAACCCCTGGCCTTGCCATCTCGAGGTA 720
|||||
mTRT: 667 AGATCAAGAGCAGTAGTCGCCAGGAAGCACCGAAACCCCTGGCCTTGCCATCTCGAGGTA 726
|||||

SEQ. ID NO.124: 721 CAAAGAGGCATCTGAGTCTACCACTACAAGTGTGCCTTCAGCTAAGAAGGCCAGATGCT 780
|||||
mTRT: 727 CAAAGAGGCATCTGAGTCTACCACTACAAGTGTGCCTTCAGCTAAGAAGGCCAGATGCT 786
|||||

SEQ. ID NO.124: 781 ATCCTGTCCCGAGAGTGGAGGAGGGACCCACAGGCAGGTGCTACCAACCCCATCAGGCA 840
|||||
mTRT: 787 ATCCTGTCCCGAGAGTGGAGGAGGGACCCACAGGCAGGTGCTACCAACCCCATCAGGCA 846
|||||
```

PATENT
USSN 08/974,584
015389-002950US
018/206p2

SEQ. ID NO.124:	841	AATCATGGGTGCCAAGTCCTGCTCGGTCCCCGAGGTGCCTACTGCAGAGAAAGATTTC	900
mTERT:	847	AATCATGGGTGCCAAGTCCTGCTCGGTCCCCGAGGTGCCTACTGCAGAGAAAGATTTC	906
SEQ. ID NO.124:	901	CTTCTAAAGGAAAGGTGCTGACCTGAGTCTCTCTGGGTGGTGTGCTGTAAACACAAGC	960
mTERT:	907	CTTCTAAAGGAAAGGTGCTGACCTGAGTCTCTCTGGGTGGTGTGCTGTAAACACAAGC	966
SEQ. ID NO.124:	961	CCAGCTCCACATCTCTGCTGTCAACACCCCGCCAAAATGCCCTTCAGCTCAGGCCATTTA	1020
mTERT:	967	CCAGCTCCACATCTCTGCTGTCAACACCCCGCCAAAATGCCCTTCAGCTCAGGCCATTTA	1026
SEQ. ID NO.124:	1021	TTGAGACCAGACATTTCTTTACTCCAGGGGAGATGGCCAACAGCGTCTAAACCCCTCAT	1080
mTERT:	1027	TTGAGACCAGACATTTCTTTACTCCAGGGGAGATGGCCAACAGCGTCTAAACCCCTCAT	1086
SEQ. ID NO.124:	1081	TCCTACTCAGCAACCTCCAGCTAACTTGACTCGGGCCAGGAGACTGGTGAGATCATCT	1140
mTERT:	1087	TCCTACTCAGCAACCTCCAGCTAACTTGACTCGGGCCAGGAGACTGGTGAGATCATCT	1146
SEQ. ID NO.124:	1141	TTCTGGGCTCAAGGCCCTAGGACATCAGGACCACTCTGCAGGACACACCGTCTATCGCGTC	1200
mTERT:	1147	TTCTGGGCTCAAGGCCCTAGGACATCAGGACCACTCTGCAGGACACACCGTCTATCGCGTC	1206
SEQ. ID NO.124:	1201	GATACTGGCAGATCGGGCCCTGTTCACACAGCTGCTGGTGAACCATGCAGAGTGCCAAT	1260
mTERT:	1207	GATACTGGCAGATCGGGCCCTGTTCACACAGCTGCTGGTGAACCATGCAGAGTGCCAAT	1266
SEQ. ID NO.124:	1261	ATGTCAGACTCCTCAGGTACATTGCAGGTTTCGAACAGCAAACCAACAGGTGACAGATG	1320
mTERT:	1267	ATGTCAGACTCCTCAGGTACATTGCAGGTTTCGAACAGCAAACCAACAGGTGACAGATG	1326
SEQ. ID NO.124:	1321	CCTTGAACACCAGCCCAACCGACCTCATGGATTTGCTCCGCCTGCACAGCAGTCCCTGGC	1380
mTERT:	1327	CCTTGAACACCAGCCCAACCGACCTCATGGATTTGCTCCGCCTGCACAGCAGTCCCTGGC	1386
SEQ. ID NO.124:	1381	AGGTATATGGTTTTCTTCGGGCTGTCTCTGCAAGGTGGTGTCTGCTAGTCTCTGGGTA	1440
mTERT:	1387	AGGTATATGGTTTTCTTCGGGCTGTCTCTGCAAGGTGGTGTCTGCTAGTCTCTGGGTA	1446
SEQ. ID NO.124:	1441	CCAGGCACAATGAGCGCCGCTTCTTTAAGAACTTAAGAAGTTCATCTCGTTGGGAAAT	1500
mTERT:	1447	CCAGGCACAATGAGCGCCGCTTCTTTAAGAACTTAAGAAGTTCATCTCGTTGGGAAAT	1506
SEQ. ID NO.124:	1501	ACGGCAAGCTATCACTGCAGGAACATGATGTGGAAGATGAAAGTAGAGGATTGCCACTGGC	1560
mTERT:	1507	ACGGCAAGCTATCACTGCAGGAACATGATGTGGAAGATGAAAGTAGAGGATTGCCACTGGC	1566
SEQ. ID NO.124:	1561	TCCGCAGCAGCCCGGGGAAGACCGTGTCCCGCTGCAGAGCACCGTCTGAGGGAGAGGA	1620
mTERT:	1567	TCCGCAGCAGCCCGGGGAAGACCGTGTCCCGCTGCAGAGCACCGTCTGAGGGAGAGGA	1626
SEQ. ID NO.124:	1621	TCCTGGCTACGTTCTCTGTTCTGGCTGATGGACACATACGTTGACAGCTGCTTAGGTCAT	1680
mTERT:	1627	TCCTGGCTACGTTCTCTGTTCTGGCTGATGGACACATACGTTGACAGCTGCTTAGGTCAT	1686
SEQ. ID NO.124:	1681	TCTTTTACATCACAGAGGACATTCAGAGAAGACAGGCTCTTCTTCTACCGTAAGAGTG	1740
mTERT:	1687	TCTTTTACATCACAGAGGACATTCAGAGAAGACAGGCTCTTCTTCTACCGTAAGAGTG	1746
SEQ. ID NO.124:	1741	TGTGAGCAAGCTGCAGAGCATTGCACTCAGGCAACACCTTGAGAGAGTGCCGCTACGGG	1800
mTERT:	1747	TGTGAGCAAGCTGCAGAGCATTGCACTCAGGCAACACCTTGAGAGAGTGCCGCTACGGG	1806

PATENT
USSN 08/974,584
015389-002950US
018/206p2

```
SEQ. ID NO.124: 1801 AGCTGTCACAAGAGGAGGTCAAGCATCACCAGGACACCTGGCTAGCCATGCCCATCTGCA 1860
                  |||
mTERT           1807 AGCTGTCACAAGAGGAGGTCAAGCATCACCAGGACACCTGGCTAGCCATGCCCATCTGCA 1866
                  |||
SEQ. ID NO.124: 1861 GACTGCGCTTCATCCCCAAGCCCAACGGCCTGCGGCCCATTTGTGAACATGAGTTATAGCA 1920
                  |||
mTERT           1867 GACTGCGCTTCATCCCCAAGCCCAACGGCCTGCGGCCCATTTGTGAACATGAGTTATAGCA 1926
                  |||
SEQ. ID NO.124: 1921 TGGGTACCAGAGCTTTGGGCAGAAGGAAGCAGGCCCAGCATTTACCCAGCGTCTCAAGA 1980
                  |||
mTERT           1927 TGGGTACCAGAGCTTTGGGCAGAAGGAAGCAGGCCCAGCATTTACCCAGCGTCTCAAGA 1986
                  |||
SEQ. ID NO.124: 1981 CTCTCTTCAGCATGCTCAACTATGACC 2007
                  |||
mTERT           1987 CTCTCTTCAGCATGCTCAACTATGACC 2013
                  |||
```

PATENT
 USSN 08/974,584
 015389-002950US
 018/206p2

Translated BLAST comparison of encoded protein

BLASTX algorithm, NCBI website

SEQ. ID NO.124:	33	MTRAPRCPAVRSLRLSRVREVWPLATFVRRLGPEGRRLVQPGDPKIYRTLVAQCLVCMHW	212
mTRT:	1	MTRAPRCPAVRSLRLSRVREVWPLATFVRRLGPEGRRLVQPGDPKIYRTLVAQCLVCMHW	60
SEQ. ID NO.124:	213	GSQPPADLSFHQVSSLKELVARVVQRLCERNERNVLAFGFELLNEARGGPPMAFTSSVR	392
mTRT:	61	GSQPPADLSFHQVSSLKELVARVVQRLCERNERNVLAFGFELLNEARGGPPMAFTSSVR	120
SEQ. ID NO.124:	393	SYLPNTVIETLRVSGAWMLLLSRVGDDLLVYLLAHCALYLLVPPSCAYQVCGSPLYQICA	572
mTRT:	121	SYLPNTVIETLRVSGAWMLLLSRVGDDLLVYLLAHCALYLLVPPSCAYQVCGSPLYQICA	180
SEQ. ID NO.124:	573	TTDIWPSVSASYPTRPVGRNFTNRLFLQQIKSSSRQEAPKPLALPSRGTKRHLSLTSTS	752
mTRT:	181	TTDIWPSVSASYPTRPVGRNFTNRLFLQQIKSSSRQEAPKPLALPSRGTKRHLSLTSTS	240
SEQ. ID NO.124:	753	VPSAKKARCYPVPRVEEGPHRQVLPTPSGKSWVSPARSPEVPTAEKDLSSKGKVS DLSL	932
mTRT:	241	VPSAKKARCYPVPRVEEGPHRQVLPTPSGKSWVSPARSPEVPTAEKDLSSKGKVS DLSL	300
SEQ. ID NO.124:	933	SGSVCCCKHKPSSTSLSPPRQNAFQLRPFIEIETHFLYSRGDQGERLNPSFLLSNLQPNLT	1112
mTRT:	301	SGSVCCCKHKPSSTSLSPPRQNAFQLRPFIEIETHFLYSRGDQGERLNPSFLLSNLQPNLT	360
SEQ. ID NO.124:	1113	GARRLVEIIFLGSRPRTSGPLCRTHRLSRRYWQMRPLFQQLLVNHAECQYVRLRSHCRF	1292
mTRT:	361	GARRLVEIIFLGSRPRTSGPLCRTHRLSRRYWQMRPLFQQLLVNHAECQYVRLRSHCRF	420
SEQ. ID NO.124:	1293	RTANQQVTDALNTSPPHMDLLRLHSSPWQVYGFRLACLCKVVSASLWGTRHNERRFFKN	1472
mTRT:	421	RTANQQVTDALNTSPPHMDLLRLHSSPWQVYGFRLACLCKVVSASLWGTRHNERRFFKN	480
SEQ. ID NO.124:	1473	LKKFISLGKYGKLSLQELMWKMKVEDCHWLRSPPCKDRVPAAEHLRERILATFLFWLMD	1652
mTRT:	481	LKKFISLGKYGKLSLQELMWKMKVEDCHWLRSPPCKDRVPAAEHLRERILATFLFWLMD	540
SEQ. ID NO.124:	1653	TYVVQLLRSFFYITESTFQKNRLFFYRKSVWSKLQSIGVRQHLEVRRLRELSQEEVRHHQ	1832
mTRT:	541	TYVVQLLRSFFYITESTFQKNRLFFYRKSVWSKLQSIGVRQHLEVRRLRELSQEEVRHHQ	600
SEQ. ID NO.124:	1833	DTWLAMPICRLRFIPKPNGLRPVNMSSYSMCTRALGRRKQAQHTQRLKTLFMSMLNVE	2006
mTRT:	601	DTWLAMPICRLRFIPKPNGLRPVNMSSYSMCTRALGRRKQAQHTQRLKTLFMSMLNVE	658